

Federal Operating Permit Article 3

This permit is based upon Federal Clean Air Act acid rain permitting requirements of Title IV, federal operating permit requirements of Title V; and Chapter 80, Article 3 and Chapter 140 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, 10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, 9 VAC 5-80-360 through 9 VAC 5-80-700, and 9 VAC 5-140-10 through 9 VAC 5-140-900 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	Virginia Electric and Power Company
Facility Name:	Dominion – Elizabeth River CT Station
Facility Location:	2837 S Military Hwy. Chesapeake, Virginia
Permit Number:	TRO-61108

This permit includes the following programs:

- Federally Enforceable Requirements - Clean Air Act (Sections I through VI)
- Federally Enforceable Requirements - Title IV Acid Rain (Section VII)
- Federally Enforceable Requirements - NOx Budget Trading Requirements (Section VIII)
- Federally Enforceable Requirements - Clean Interstate Rule (CAIR) Requirements (Section IX)

November 14, 2007
Effective Date

December 31, 2011
Expiration Date

Francis L. Daniel

November 14, 2007
Signature Date

Table of Contents, Pages 2-3
Permit Conditions, Pages 4-33

Table of Contents

I.	FACILITY INFORMATION.....	4
II.	EMISSION UNITS.....	5
III.	FUEL BURNING EQUIPMENT REQUIREMENTS - (GAS TURBINES CT-1, CT-2, CT-3)	6
A.	DEFINITIONS.....	6
B.	LIMITATIONS	6
C.	MONITORING	9
D.	RECORDKEEPING	10
E.	TESTING	11
F.	REPORTING.....	12
IV.	INSIGNIFICANT EMISSION UNITS.....	13
V.	PERMIT SHIELD & INAPPLICABLE REQUIREMENTS.....	14
VI.	GENERAL CONDITIONS.....	15
A.	FEDERAL ENFORCEABILITY	15
B.	PERMIT EXPIRATION.....	15
C.	RECORDKEEPING AND REPORTING	15
D.	ANNUAL COMPLIANCE CERTIFICATION.....	16
E.	PERMIT DEVIATION REPORTING	17
F.	FAILURE/MALFUNCTION REPORTING	17
G.	SEVERABILITY	17
H.	DUTY TO COMPLY	18
I.	NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE	18
J.	PERMIT MODIFICATION	18
K.	PROPERTY RIGHTS.....	18
L.	DUTY TO SUBMIT INFORMATION	18
M.	DUTY TO PAY PERMIT FEES.....	19
N.	FUGITIVE DUST EMISSION STANDARDS.....	19
O.	STARTUP, SHUTDOWN, AND MALFUNCTION.....	19
P.	ALTERNATIVE OPERATING SCENARIOS	20
Q.	INSPECTION AND ENTRY REQUIREMENTS	20
R.	REOPENING FOR CAUSE	20
S.	PERMIT AVAILABILITY	21
T.	TRANSFER OF PERMITS.....	21
U.	MALFUNCTION AS AN AFFIRMATIVE DEFENSE	21
V.	PERMIT REVOCATION OR TERMINATION FOR CAUSE.....	22
W.	DUTY TO SUPPLEMENT OR CORRECT APPLICATION.....	22
X.	STRATOSPHERIC OZONE PROTECTION	22
Y.	ASBESTOS REQUIREMENTS.....	22
Z.	ACCIDENTAL RELEASE PREVENTION	23
AA.	CHANGES TO PERMITS FOR EMISSIONS TRADING.....	23
BB.	EMISSIONS TRADING	23
VII.	TITLE IV (PHASE II ACID RAIN) PERMIT ALLOWANCES AND REQUIREMENTS.....	23
A.	STATUTORY AND REGULATORY AUTHORITIES	23
B.	SO ₂ ALLOWANCE ALLOCATIONS AND NO _x REQUIREMENTS FOR AFFECTED UNITS	24
C.	ADDITIONAL REQUIREMENTS AND NOTES.....	24

VIII. NO_x BUDGET TRADING PROGRAM REQUIREMENTS.....24

A. NO_x BUDGET PERMIT GENERAL CONDITIONS 24

B. STANDARD REQUIREMENTS.....26

C. NITROGEN OXIDES REQUIREMENTS.....30

D. RECORDKEEPING AND REPORTING REQUIREMENTS.....31

E. EMISSION TESTING 32

F. LIABILITY 32

G. EFFECT ON OTHER AUTHORITIES. 33

IX. CLEAN AIR INTERSTATE RULE (CAIR) REQUIREMENTS33

A. CAIR GENERAL CONDITIONS..... 33

I. Facility Information

Permittee Information

Virginia Electric and Power Company
5000 Dominion Blvd.
Glen Allen, VA 23060

Responsible Official

Mr. O. Preston Sloane
Station Director

Acid Rain Designated Representative and NO_x Budget Trading Authorized Account Representative

Mr. C. D. Holley
Vice-President – Fossil & Hydro
USEPA ATS-AAR ID number: 2099

Facility ID

Dominion – Elizabeth River CT Station
2837 South Military Hwy,
Chesapeake, VA 23323-0286

Facility Contact person

D. Scott Morelen
(757) 719-1134

County-Plant Identification Number: 51-550-00161

ORIS Code: 52087

NATS Facility Identification Number: 05208700CTZ1-CTZ3

Facility Description: SIC Code: 4911, **NAICS Code:** 22112

This facility is an electric generation facility using three simple cycle gas combustion turbines, and associated support equipment. The turbines are low mass emissions (LME) units as defined in 40 CFR 75.2 (actual emissions below 50 tons NO_x per control period, and 100 tons NO_x per year). As specified in 40 CFR 75.19, the turbines use optional NO_x emission estimation procedures in lieu of continuous NO_x emissions monitoring systems to determine NO_x emissions. The facility became subject to the Acid Rain program when it was purchased by Virginia Electric and Power Company on November 30, 2004. Dominion Generation is the operator of this facility.

II. Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emissions Unit Description	Rated Heat* Input Capacity (10 ⁶ BTU/hr)	Pollution Control Device (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment							
CT1-A	S1	Westinghouse W501D5 simple cycle turbine firing natural gas (primary)/ firing #2 fuel oil (secondary) 1991	1406	-	-	-	6/13/2007
CT2-A	S2	Westinghouse W501D5 simple cycle turbine firing natural gas (primary)/ firing #2 fuel oil (secondary) 1991	1406	-	-	-	6/13/2007
CT3-A	S3	Westinghouse W501D5 simple cycle turbine firing natural gas (primary)/ firing #2 fuel oil (secondary) 1991	1406	-	-	-	6/13/2007

III. Fuel Burning Equipment Requirements - (Gas Turbines CT-1, CT-2, CT-3)

A. Definitions

1. Natural Gas - means a naturally occurring fluid mixture of hydrocarbons (*e.g.*, methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Natural gas contains 20.0 grains or less of total sulfur per 100 standard cubic feet. Equivalents of this in other units are as follows: 0.068 weight percent total sulfur, 680 parts per million by weight (ppmw) total sulfur, and 338 parts per million by volume (ppmv) at 20 degrees Celsius total sulfur. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 British thermal units (Btu) per standard cubic foot. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.
2. No Load Testing – means testing the turbine when the turbine is spinning but not generating any electricity.
3. Start-up – The period starting when fuel is first combusted and ending when the turbine reaches the allowed operating load (as defined in Condition B.6), not to exceed 60 minutes.
4. Shutdown – the period starting when the operator initiates a shutdown procedure and ending when fuel is no longer being combusted or when the turbine shutdown is aborted to bring the turbine back on line.

B. Limitations

5. **Emission Controls** - Nitrogen dioxide (NO_x) emissions from each turbine shall be controlled by water injection. The turbines and water injection systems shall be provided with adequate access for inspection. The water injection shall be in operation at all times when the turbines are operating within the allowed range as defined in Condition 6.
(9 VAC 5-80-490 B & C and Condition 4 of 6/13/2007 Permit)
6. **Operating Ranges** - Each turbine shall be operated at not less than 85% and not greater than 100% of rated capacity, with the exception of startup, shutdown and no load testing. Once start-up is completed and the unit is operating between 85% and 100% load, compliance with the minimum operating load of 85% is determined by averaging the two minute % load readings for that clock hour period divided by the total number of load readings in the given clock hour period. 100% rated capacity is defined as the maximum load achievable given ambient weather and gas turbine performance conditions.
(9 VAC 5-80-490 B & C and Condition 6 of 6/13/2007 Permit)
7. **Operating Restrictions** – The inlet air fogging/cooling system shall only be operated if ambient air temperatures exceed 60° F.
(9 VAC 5-80-490 B & C and Condition 7 of 6/13/2007 Permit)

8. **Operating Hours** - The three turbines (combined) shall not operate more than 6,000 hours per year, and no single unit shall operate for more than 2,500 hours per year, each calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-490 B & C and Condition 8 of 6/13/2007 Permit)
9. **Fuel** - The approved fuels for the turbines are No. 2 fuel oil and natural gas. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-490 B & C, 9 VAC 5-80-110 and Condition 9 of 6/13/2007 Permit)
10. **Fuel Throughput** - The three turbines (combined) shall consume no more than 59.6×10^6 gallons of No. 2 fuel oil (distillate oil) and $9,000 \times 10^6$ cubic feet of natural gas per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months. Fuel consumption shall be determined for each unit in accordance with the methods used to show compliance with 9 VAC 5 Chapter 140 if the “Long Term Fuel Flow” method is being used, otherwise consumption shall be determined by a method that has been approved by the Department.
(9 VAC 5-80-490 B & C, 40 CFR 75.19(c)(3)(ii) and Condition 10 of 6/13/2007 Permit)
11. **Fuel** – The No. 2 fuel oil and natural gas shall meet the specifications below:
- | | |
|---------------------------|-------------------------------------|
| No. 2 fuel oil | |
| Maximum sulfur content: | 0.2% by weight |
| Maximum nitrogen content: | 0.05% by weight |
| Natural Gas: | |
| Maximum sulfur content: | 0.06% by weight or |
| Maximum sulfur content: | 20.0 grains/100 standard cubic feet |
- (9 VAC 5-80-490 B & C and Condition 11 of 6/13/2007 Permit)

12. Emission Limits - Emissions from the operation of each turbine shall not exceed the limits specified below:

Pollutant	Firing Natural Gas		Firing Fuel Oil		Combined Annual Limit for all 3 Turbines (tons/yr)
	Concentration ^(a) (ppmvd)	Hourly Limit ^(b) (lbs/hr)	Concentration ^(a) (ppmvd)	Hourly Limit ^(b) (lbs/hr)	
Particulate Matter ^(c)		6.0		22.0	66.0
PM-10 ^(c)		6.0		22.0	66.0
Sulfur Dioxide		87.0		290.0	870.0
Nitrogen Oxides (as NO ₂)	25	139.0	42 (FBN ≤ 0.015, wt %)	233.0	1,032.0
			42 + 400 FBN (0.015 < FBN ≤ 0.05) (wt %)	344.0	
Carbon Monoxide ^(c)	30	87.0	30	84.0	261.0
Volatile Organic Compounds (VOC) ^(c)	4	6.5	16	26.7	80.1
Sulfuric Acid Mist (H ₂ SO ₄) ^(c)		13.2		44.4	133.2
Beryllium				0.0005	0.0015

^(a) at ISO conditions and 15% Oxygen

^(b) Averaged for each operating hour

^(c) Except during start-up, shutdown and malfunction conditions

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 5 - 11, C.15, C.16 and E.19.

(9 VAC 5-80-490 B and Condition 13 of 6/13/2007 Permit)

13. Visible Emission Limit - Visible emissions from each of the turbines shall not exceed 10% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 20% opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.

(9 VAC 5-50-80, 9 VAC 5-50-260 and Condition 14 of 6/13/2007 Permit)

14. Requirements by Reference - Except where this permit is more restrictive than the applicable requirement, the NSPS equipment as described in Section II shall be operated in compliance with the requirements of 40 CFR 60, Subpart GG. The permittee will not be using the fuel bound nitrogen (FBN) allowance to show compliance with Subpart GG, therefore the parts of Subpart GG that pertain to the FBN allowance are not applicable.

(9 VAC 5-50-400, 9 VAC 5-50-410 and Condition 16 of 6/13/2007 Permit)

C. Monitoring

15. **Monitoring Devices** - Each turbine shall be equipped with a device to continuously monitor and record the fuel consumption, water injection and the ratio of water to fuel being fired in the turbine. Each monitoring device shall be installed, maintained and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the turbines are operating.

(9 VAC 5-80-490 B & C and Condition 5 of 6/13/2007 Permit)

16. **Fuel Certification** - The permittee shall:

a. Pipeline No. 2 Fuel Oil

(1) Sample the oil in the storage tank using approved ASTM methods after each receipt of oil. The sulfur content and the nitrogen content of the sample shall be determined using approved ASTM methods (ASTM D129, D1266, D1552, D2622, D4294, or D5453 for sulfur and ASTM D2597, D4629 or D5762 for nitrogen.), or any approved ASTM method incorporated in 40 CFR by reference, and

(2) Receive a statement from the fuel supplier for each delivery stating that the fuel oil received complies with the American Society for Testing and Materials specifications for numbers 1 or 2 fuel oil or sample the oil and have it tested to verify that the distillate oil complies with the American Society for Testing and Materials specifications for numbers 1 or 2 fuel oil.

b. Natural gas: Obtain documentation that the maximum sulfur content is less than or equal to 20.0 grains/100scf or 0.06 % by weight. Acceptable documentation can be in the form of any of the following if valid and current

(1) Purchase contract,

(2) Tariff sheets of transportation

(3) Pipeline transportation contracts

(4) Analysis of samples in accordance with Part 75.

(9 VAC 5-80-490 B & C and Condition 12 of 6/13/2007 Permit)

17. **Visible Emission Observations (VEO)** - The permittee shall perform VEOs on the exhaust stack of each Westinghouse W501D5 simple cycle combustion turbine according to the following operation frequency guidelines:

<u>Operating Schedule/History</u>	<u>Observation Frequency</u>
< 20 hrs / year and no OV testing*	No Evaluations Required
< 20 hrs / year with OV testing*	Once per year
20 hrs/yr < hours operated < 200 hrs/yr	Once per year
hours operated > 200 hrs/yr	Once every 200 hours

*OV testing means operability verification testing

Each VEO shall be performed for a sufficient period of time (minimum of 6 minutes) to identify the presence of visible emissions. If visible emissions are observed, a Method 9-certified observer shall conduct a VEO. If visible emissions do not appear to exceed 10% opacity, no action shall be required. However, if the observed visible emissions appear to exceed 10% opacity, a visible emission evaluation (VEE) shall be conducted using 40 CFR Part 60, Appendix A, Method 9, for a period of not less than 6 minutes. If the average opacity exceeds 10%, modifications and/or repairs shall be performed to correct the problem. Once the problem is corrected another 6 minute VEE shall be performed to prove that the corrective action taken was effective. The VEE observer shall be Method 9-certified. The permittee shall maintain a log to demonstrate compliance with this condition. The log shall include the date and time of the observations, the observer's name, whether or not there were visible emissions, any VEE recordings and any necessary corrective action taken. The logbook shall be kept at the facility and available for inspection by the DEQ.

(9 VAC 5-80-490 B & C and Condition 15 of 6/13/2007 Permit)

D. Recordkeeping

18. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Tidewater Regional Office. These records shall include, but are not limited to:
- Records of the one-hour block averages of the water to fuel ratio for each turbine and acceptable range for that hour.
 - One-hour block average records of the operating rate (load rate) expressed as a percentage of rated capacity of each turbine to demonstrate compliance with Condition B.6.
 - Annual hours of operation of each of the combustion turbines and the combined number of hours, calculated monthly as the sum of each consecutive 12-month period.
 - Annual throughput of No. 2 fuel oil, calculated monthly as the sum of each consecutive 12-month period.
 - Annual throughput of natural gas, calculated monthly as the sum of each consecutive 12-month period.
 - Fuel analyses/certifications to satisfy conditions B.11 and C.16.
 - Parameter monitoring plan required by 60.334(g) shall be available on-site.

- h. Records of VEO and VEE logs to satisfy Condition C.17.
- i. Scheduled and unscheduled maintenance and operator training.
- j. Monthly and annual NO_x emissions (in pounds or tons) from the operation of the three gas turbines (combined). Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.
- k. Description of method used to calculate NO_x emissions including equations, examples calculations and procedures used to determine Btu/gal, fuel usage, unit lb/mmBtu, or Btu/cf.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-50-50, 9 VAC 5-80-490 F and Condition 20 of 6/13/2007 Permit)

E. Testing

19. **Stack Tests** – Periodically and upon request by the DEQ, the permittee shall conduct additional performance tests for NO_x (by methods referenced in 40 CFR Part 60, Subpart GG), CO (by method 10 or 10B) and VOC (by method pre-approved by DEQ in protocol) from the turbines (as specified below) to demonstrate compliance with the emission limits contained in this permit. Data from the monitoring of water to fuel ratio obtained during the test must be included in the stack test emission report.

Two of the three gas turbines shall be tested during each five year Title V permit term. The testing shall take place within the first 24 months of each Title V permit term. Testing that has taken place between December 31, 2006 and the effective date of this permit may be used to comply with this condition. Each turbine shall be tested at least once every other testing cycle. Each test shall be conducted while operating the turbine at 85% and 100% load capacities, firing natural gas only and firing fuel oil only. The testing shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30. The details and schedule of the tests shall be arranged in advance with the Tidewater Regional Office. The permittee shall submit an approvable test protocol at least 30 days prior to testing. One copy of the test results shall be submitted to the Tidewater Regional Office within 60 days after test completion and shall conform to the test report format enclosed with this permit.

A Visible Emissions Evaluation (VEE), in accordance with 40 CFR Part 60, Appendix A, Method 9, shall also be conducted on the gas turbine's exhaust stack at each of the specified load conditions while firing oil. The VEE shall consist of 1 set of 24 consecutive observations (at 15 second intervals) to yield a 6-minute average.

(9 VAC 5-80-490 E & F and Condition 17 of the 6/13/2007 Permit)

20. **Testing/Monitoring Ports** - The permitted facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Test ports shall be provided when requested.

(9 VAC 5-50-30, 9 VAC 5-80-490 E & F and Condition 19 of the 6/13/2007 Permit)

F. Reporting

21. The permittee shall submit excess emissions and monitoring downtime reports in accordance with 40 CFR 60.7(c) to the Director, Tidewater Regional Office within 30 days after the end of each semi-annual period. (The semi-annual periods are defined as January 1-June 30 and July 1–December 31. Reports are due by January 30 and July 30 of each year.)
- a. NO_x emissions
- (1) Periods of excess NO_x emissions are defined as any unit operating hour during which the average water-to-fuel ratio, as measured by the continuous monitoring system (CMS), falls below the acceptable water-to-fuel ratio determined to demonstrate compliance with Condition I.A.1 by the most recent performance test. Any unit operating hour in which no water is injected into the turbine shall also be considered an excess emission, including times of startup, shutdown and malfunction.
 - (2) Monitor downtime includes, but is not limited to, any unit operating hour in which water is injected into the turbine, but essential parametric data needed to determine the appropriate water to fuel ratio are unavailable or invalid.
 - (3) Excess emissions and downtime period defined:
 - (a) An excess emission shall be the period of time during which the fuel-bound nitrogen (FBN) is greater than 0.05% by weight. The excess emission begins on the date and hour of the sample which shows that N is greater than 0.05% by weight, and ends with the date and hour of a subsequent sample which shows a fuel nitrogen content less than or equal to 0.05% by wt.
 - (b) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour that a required sample is taken, if invalid results are obtained. The period of monitor downtime ends on the date and hour of the next valid sample.
- b. SO₂ Emissions
- (1) An excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel oil being fired in the gas turbine exceeds 0.2% by weight and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.
 - (2) An excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the natural gas being fired in the gas turbine exceeds 0.06% by weight or 20.0 grains/100 scf and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.
 - (3) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample.

- c. Each excess emissions report shall include the average water to fuel ratio, average fuel consumption, the fuel sulfur content, ambient conditions (temperature, pressure, and humidity), gas turbine load, and (if applicable) the nitrogen content of the fuel during each excess emission. The permittee does not have to report ambient conditions if they have opted to use the worst case ISO correction factor as specified in §60.334(b)(3)(ii), or if they opted not to use the ISO correction equation under the provisions of §60.335(b)(1).

One copy of the semi-annual report shall be submitted to the U.S. Environmental Protection Agency at the address specified below:

Associate Director
Office of Air Enforcement (3AP10)
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

(9 VAC 5-80-490 F and Condition 21 of 6/13/2007 Permit)

IV. Insignificant Emission Units

The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emissions Unit No.	Emissions Unit Description	Citation (9 VAC)	Pollutant Emitted (5-80-720 B)	Rated Capacity (5-80-720 C)
IC-1	Model P-185D air compressor, rated at 0.56 mmbtu/hr	5-80-720 B	NO _x , PM, PM ₁₀ , VOC, CO	84 HP
IL-1	Sandblaster	5-80-720 B	PM, PM ₁₀	n/a
IL-2	Fuel oil valves, pumps, flanges	5-80-720 B	VOC	n/a
IL-5	Turbine lube oil venting	5-80-720 B	VOC	n/a
IL-7	Cold solvent cleaner	5-80-720 B	VOC	n/a

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, monitoring, recordkeeping and reporting shall not be required for these emission units in accordance with 9 VAC 5-80-490 C, E, and F .

V. Permit Shield & Inapplicable Requirements

Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Requirements Which Do Not Apply to the Source			
Unit Ref No	Citation	Requirement Description	Why it Does not Apply
Facility	40 CFR 63 Subpart T	National Emission Standards for Halogenated Solvent Cleaning	Dominion does not own or operate any equipment meeting the applicability criteria of this NESHAP subpart.
Facility	40 CFR 63 Subpart VV	National Emission Standards for Oil-Water Separators and Organic-Water Separators	This section is applicable only to facilities subject to other subparts that reference this subpart. Dominion is not subject to any subparts that reference this subpart.
Facility	40 CFR 68	Chemical Accident Prevention Provisions	Dominion does not exceed threshold values for designated substances.
Facility	9 VAC 5-70-10; 9 VAC 5-70-70	Applicability of, and Compliance with, Air Quality Standards; Nonattainment Areas	The Hampton Roads area has recently been redesignated an attainment area, therefore, despite its listing in Appendix K, the requirements do not apply.
CT 1-3	40 CFR 63 Subpart YYYY	National Emission Standards for Stationary Combustion Turbines	These turbines are considered existing units and are specifically exempted in Section 63.6090(b)(4).
CT 1-3	40 CFR 60 Subpart KKKK	Standards of Performance for Stationary Combustion Turbines	For stationary combustion turbines that commenced construction, modification or reconstruction after February 18, 2005.

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.
(9 VAC 5-80-500)

VI. General Conditions

A. Federal Enforceability

All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.
(9 VAC 5-80-110 N)

B. Permit Expiration

22. This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9 VAC 5-80-80, the right of the facility to operate shall be terminated upon permit expiration.
- a. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.
 - b. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.
 - c. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.
 - d. If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.
 - e. The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.
- (9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)

C. Recordkeeping and Reporting

23. All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:
- a. The date, place as defined in the permit, and time of sampling or measurements.
 - b. The date(s) analyses were performed.
 - c. The company or entity that performed the analyses.

- d. The analytical techniques or methods used.
- e. The results of such analyses.
- f. The operating conditions existing at the time of sampling or measurement.
(9 VAC 5-80-110 F)

24. Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
(9 VAC 5-80-110 F)

25. The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than **March 1** and **September 1** of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

- a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31.
- b. All deviations from permit requirements. For purpose of this permit, deviations include, but are not limited to:
 - (1) Exceedance of emissions limitations or operational restrictions;
 - (2) Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or Compliance Assurance Monitoring (CAM) which indicates an exceedance of emission limitations or operational restrictions; or,
 - (3) Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.
- c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that “no deviations from permit requirements occurred during this semi-annual reporting period.”
(9 VAC 5-80-110 F)

D. Annual Compliance Certification

26. Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

- a. The time period included in the certification. The time period to be addressed is January 1 to December 31.
- b. The identification of each term or condition of the permit that is the basis of the certification.
- c. The compliance status.

- d. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.
- e. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.
- f. Such other facts as the permit may require to determine the compliance status of the source.
- g. One copy of the annual compliance certification shall be sent to EPA at the following address:

Clean Air Act Title V Compliance Certification (3AP00)

U.S. Environmental Protection Agency, Region III

1650 Arch Street

Philadelphia, PA 19103-2029

(9 VAC 5-80-110 K.5)

E. Permit Deviation Reporting

27. The permittee shall notify the Director, Tidewater Regional Office within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to General Condition C.25 of this permit.
(9 VAC 5-80-110 F.2 and 9 VAC 5-80-250)

F. Failure/Malfunction Reporting

28. In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after the malfunction is discovered, notify the Director, Tidewater Regional Office by fax, telephone or e-mail of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Director, Tidewater Regional Office.
(9 VAC 5-20-180 C)

G. Severability

29. The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
(9 VAC 5-80-110 G.1)

H. Duty to Comply

30. The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is ground for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.
(9 VAC 5-80-110 G.2)

I. Need to Halt or Reduce Activity not a Defense

31. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
(9 VAC 5-80-110 G.3)

J. Permit Modification

32. A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1605, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.
(9 VAC 5-80-190 and 9 VAC 5-80-260)

K. Property Rights

33. The permit does not convey any property rights of any sort, or any exclusive privilege.
(9 VAC 5-80-110 G.5)

L. Duty to Submit Information

34. The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.
(9 VAC 5-80-110 G.6)
35. Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G.
(9 VAC 5-80-110 K.1)

M. Duty to Pay Permit Fees

36. The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-300 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by April 15 of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department.
(9 VAC 5-80-110 H and 9 VAC 5-80-340 C)

N. Fugitive Dust Emission Standards

37. During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:
- a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;
 - b. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;
 - c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or similar operations;
 - d. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,
 - e. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.
- (9 VAC 5-40-90)

O. Startup, Shutdown, and Malfunction

38. At all times, including periods of startup, shutdown, and soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
(9 VAC 5-40-20 E)

P. Alternative Operating Scenarios

39. Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1.
(9 VAC 5-80-110 J)

Q. Inspection and Entry Requirements

40. The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:
- a. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.
 - d. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.
- (9 VAC 5-80-110 K.2)

R. Reopening For Cause

41. The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F.
42. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
43. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
44. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.
(9 VAC 5-80-110 L)

S. Permit Availability

45. Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.
(9 VAC 5-80-150 E)

T. Transfer of Permits

46. No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.
(9 VAC 5-80-160)
47. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)
48. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)

U. Malfunction as an Affirmative Defense

49. A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the requirements of paragraph 2 of this condition are met.
50. The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:
- a. A malfunction occurred and the permittee can identify the cause or causes of the malfunction.
 - b. The permitted facility was at the time being properly operated.
 - c. During the period of the malfunction the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.
 - d. The permittee notified the Board of the malfunction within two working days following the time when the emission limitations were exceeded due to the malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification may be delivered either orally or in writing. The notification may be delivered by electronic mail, facsimile transmission, telephone, or any other method that allows the permittee to comply with the deadline. This notification fulfills the requirements of 9 VAC 5-80-110 F.2.b to report promptly deviations from permit requirements. This notification does not release the permittee from the malfunction reporting requirement under 9 VAC 5-20-180 C.

51. In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof.
52. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.
(9 VAC 5-80-250)

V. Permit Revocation or Termination for Cause

53. A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe any permit for any grounds for revocation or termination or for any other violations of these regulations.
(9 VAC 5-80-190 C and 9 VAC 5-80-260)

W. Duty to Supplement or Correct Application

54. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.
(9 VAC 5-80-80 E)

X. Stratospheric Ozone Protection

55. If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(40 CFR Part 82, Subparts A-F)

Y. Asbestos Requirements

56. The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).
(9 VAC 5-60-70 and 9 VAC 5-80-110 A.1)

Z. Accidental Release Prevention

57. If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.
(40 CFR Part 68)

AA. Changes to Permits for Emissions Trading

58. No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9 VAC 5-80-110 I)

BB. Emissions Trading

59. Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:
- a. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.
 - b. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.
 - c. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.
(9 VAC 5-80-110 I)

VII. Title IV (Phase II Acid Rain) Permit Allowances and Requirements

A. Statutory and Regulatory Authorities

60. In accordance with the Air Pollution Control Law of Virginia §10.1-1308 and §10.1-1322, the Environmental Protection Agency (EPA) Final Full Approval of the Operating Permits Program (Titles IV and V) published in the Federal Register December 4, 2001, Volume 66, Number 233, Rules and Regulations, Pages 62961-62967 and effective November 30, 2001, and Title 40, the Code of Federal Regulations §§72.1 through 76.16, the Commonwealth of Virginia Department of Environmental Quality issues this permit pursuant to 9 VAC 5 Chapter 80, Article 3 of the Virginia Regulations for the Control and Abatement of Air Pollution (Federal Operating Permit Article 3).
(9 VAC 5-80-490 B.2)

B. SO₂ Allowance Allocations and NO_x Requirements for affected units

Applicable Units	Allowances	2007-2010
CT1-3 Each a 126 MWe/hr (nominally rated) gas or #2 fuel oil fired simple cycle gas turbine.	SO ₂ allowances, allocated by EPA (tons):	None ¹
	NO _x limit:	N/A ²

Note 1: The units were not subject to the Acid Rain Program at the time of allocations, so no allowances were assigned in 40 CFR Part 73, Table 2.

Note 2: The units are not subject to 40 CFR 76
 (9 VAC 5-80-490 A.4)

C. Additional Requirements and Notes

61. Additional Requirements – The permittee shall submit a complete permit application that includes all of the information required under 40 CFR §72.21 and 72.31 at least 6 months, but no earlier than 18 months, prior to the date of expiration of the existing Phase II Acid Rain permit. EPA forms shall be used.

(9 VAC 5-80-430 C.5)

62. Notes -

a. SO₂ allowances may be acquired from other sources in addition to those allocated by U.S. EPA. No revision to this permit is necessary in order for the owners and operators of this unit to hold additional allowances recorded in accordance with 40 CFR Part 73. The owners and operators of this unit remain obligated to hold sufficient allowances to account for SO₂ emissions from this unit in accordance with 40 CFR 72.9(c)(1).

(9 VAC 5-80-420 C.1 and H.1 and 9 VAC 5-80-490 O)

b. This unit was not eligible for SO₂ allowance allocation by U.S. EPA under Section 405 of the Clean Air Act and the Acid Rain Program, so none were assigned in 40 CFR Part 73, Table 2.

(9 VAC 5-80-420 C.6)

VIII. NO_x Budget Trading Program Requirements

A. NO_x Budget Permit General Conditions

63. A review of the air emission units included in this permit approval has determined that the equipment listed in the following table meets the definition of a NO_x Budget Unit and falls subject to the NO_x Budget emission limitations under 9 VAC 5-140-40 or for opt-in sources 9 VAC 5-140-800. As required by 9 VAC 5-140-200 A, each NO_x Budget source is required to have a federally enforceable permit. This section of the document represents the NO_x Budget permit.

(9 VAC 5-140-40) or (9 VAC 5-140-800)

64. The NO_x Budget permit will be administrated by the VADEQ under the authority of 9 VAC 5-80-360 et seq., and 9 VAC 5-140-10 et seq.
 (9 VAC 5-140-200 A)
65. The following air emission units have been determined to meet the applicability requirements as provided in 9 VAC 5-140-40 A.1 and A.2., and the air emission unit(s) have been determined to meet the applicability requirements to be considered a Low Mass Emissions (LME) Unit as provided in 40 CFR 75.19. To maintain this classification, it is the owner's responsibly to limit NO_x emissions from these individual units to no more than 25 tons of SO₂ annually and less than 100 tons of NO_x annually (January 1-December 31) and no more than 50 tons of the allowed annual tons of NO_x during the ozone control period (May 1 thru September 30).
 (9 VAC 5-140-40 A)

Table VIII – 1

Facility NO_x Budget Units				
Facility Unit ID	Unit NATS Code	Unit Name and description	Maximum Heat Capacity (MMBtu/hr)	Maximum Generation Capacity (megawatts)
CT1	05208700CTZ 1	Westinghouse W501D5 simple cycle gas combustion turbine	1406 (1553)	126
CT2	05208700CTZ 2	Westinghouse W501D5 simple cycle gas combustion turbine	1406 (1553)	126
CT3	05208700CTZ 3	Westinghouse W501D5 simple cycle gas combustion turbine	1406 (1553)	126

66. This NO_x Budget permit became effective on May 31, 2004.

B. Standard Requirements

67. Continuous Monitoring requirements.

- a. The owners and operators and, to the extent applicable, the NO_x authorized account representative of each NO_x Budget source and each NO_x Budget unit at the source shall comply with the monitoring requirements of 9 VAC 5-140-700 et seq.
- b. The emissions measurements recorded and reported in accordance with (9 VAC 5-140-700 et seq.) (subparts H of 40 CFR 75 and 40 CFR 97) shall be used to determine compliance by the unit with the NO_x Budget emissions limitation under Conditions 68.a.- h. The following approved methods will be used to calculate NO_x Control Period and Annual emission rates:

Table VIII - 2

Pollutant/Stack Parameter	LME Monitoring Methods; 40 CFR 75 (Continuous Emission Monitoring), Subpart B (75.10 to 75.19)
1. Hourly NO _x emission rate (W _{NO_x}) in lb NO _x /hr	Determine NO _x using default values, or parametric monitoring (40 CFR 75.19(c)(1)(iv)(H)(1)). Eq. LM-10: Hrly NO _x Emissions = W _{NO_x} = EF _{NO_x} x HI _{hr} Lb NO _x /hr = lb NO _x /mmBtu x mmBtu/hr (Ref: 40 CFR 75.12(e), 75.19(c)(1)(ii), & 75.19(c)(4)(ii))
2. NO _x emissions rate (EF _{NO_x}) in lb NO _x /mmBtu	Options: a) Use default NO _x rate (40 CFR 75.19 Table LM-2); or b) Use a fuel and unit specific emission rate determined according to 40 CFR 75.19(c)(1)(iv) for those hours where water-to-fuel ratio is within the acceptable range specified in the monitoring plan. (Ref: 40 CFR 75.19(c)(1)(ii) and 75.19(c)(1)(iv)(H)(1))
3. Heat input rate (HI _{hr}) in mmBtu/hr	Options: a) Use unit's maximum rated capacity from 40 CFR 75.19(c)(3)(i)(A), and calculate total heat input for the quarter with Eqn. LM-1, where: Qtrly heat input (all fuels) = HI _{qtr} = ∑ HI _{hr} (for all hours) mmBtu/qtr = Sum of hourly heat input for all hours; or b) Use long term fuel flow method from 40 CFR 75.19(c)(3)(ii).

Table VIII-3

NO_x Determination (Unit-Specific Emission Rates)	
1. Initial stack tests for NO _x	<p>a) Conduct test(s) before end of the ozone season in which the emission rate is first used.</p> <p>b) Test each unit for each fuel in accordance with Section 2.1 of Appendix E, except as stated in 40 CFR 75.19(c)(1)(iv)(A), unless the units currently qualify as identical according to 40 CFR 75.19(c)(1)(iv)(B)(1), in which case representative testing can be conducted on two of three turbines according to 40 CFR 75.19, Table LM-4.</p> <p>c) Establish at least four approximately equally spaced operating load points, ranging from the maximum to the minimum. Select the maximum and minimum from the operating history of the unit during the most recent two years, or if projections for the next five years indicate a significantly different maximum or minimum, choose based on the projection.</p> <p>d) Test at four load points unless the unit qualifies for one of the following exemptions. One load is sufficient if the unit operated at a single load for at least 85% of all operating hours in the previous three years (12 calendar quarters) prior to the calendar quarter of the testing. Likewise, two or three loads are sufficient if the units operated (of all identical units have operated) cumulatively at two or three loads for 85% of the operating hours.</p> <p>e) Use in calculations the highest three-run average NO_x emission rate obtained for any load for a particular fuel for each unit per 40 CFR 75.19(c)(1)(iv)(C)(1) unless identical unit testing is conducted, in which case the highest rate of all the units must be used for all the identical units per 40 CFR 75.19(c)(1)(iv)(C)(3).</p> <p>(Ref: 40 CFR 75.19(c)(1)(iv))</p>
2. Ongoing stack tests	<p>a) Determine new NO_x emission rate(s) every five years (20 calendar quarters), unless changes occur.</p> <p>b) Determine new NO_x emission rate(s) after any changes in fuel supply, physical changes to the unit, changes in manner of unit operation, or if changes to the emission controls occur that may cause a significant increase in the unit's actual emission rate.</p> <p>c) If a multiple-load test was initially performed for a unit (or group of identical units), test may be conducted at the single load which had the highest average emission rate during the initial test.</p> <p>(Ref: 40 CFR 75.19(c)(1)(iv)(D))</p>

<p>3. Water-to-fuel ratio</p>	<p>Monitor and record water-to-fuel ratio for each “unit operating hour”, as defined in section 72.2 of 40 CFR Part 72, Subpart A, during test periods and normal operation. (Ref: 40 CFR 75.19(c)(1)(iv)(H))</p>
<p>4. Onsite QC/QA plan</p>	<p>a) Unless the requirements of section 2.1.4.2 of 40 CFR 75, Appendix D are met concerning use of commercial gas or oil flowmeters, the accuracy of each fuel flowmeter shall be tested prior to use, and at least once every four “Fuel flowmeter QA operating quarters”, as defined in section 72.2 of 40 CFR Part 72, Subpart A. In no case shall more than 20 calendar quarters elapse between checks. (Ref: Sections 2.1.4 & 2.1.6 of 40 CFR 75 Appendix D)</p> <p>b) Develop and keep an onsite quality assurance plan that explains procedures used to document proper operation of NO_x emission controls (water injection). The plan shall include parameters monitored (water-to-fuel ratio), and acceptable ranges for each parameter used to determine proper emission control operation. (Ref: 40 CFR 75.19(e)(5))</p>

Table VIII-4

Heat Input Determination (Long Term Fuel Flow Method)	
1. Quarterly fuel use	Options: a) Use fuel billing records; b) Measure oil tank volumes by one of the approved methods in 40 CFR 75.19(c)(3)(ii)(B); or c) Record flow with a certified fuel flowmeter. (Ref: 40 CFR 75.19(c)(3)(ii)(B))
2. Fuel heat content (mmBtu/gallon)	Options: a) Use default gross calorific values from Table LM-5 of 40 CFR 75.19; or b) Sample and analyze fuels in accordance with Sections 2.2 and 2.3 of Appendix D; use each fuel's highest gross calorific value recorded during previous calendar year. (Ref: 40 CFR 75.19(c)(3)(ii)(C))
3. Total heat input ($HI_{fuel\ qtr}$) during a quarter from a particular fuel	LM-3: $HI_{fuel\ qtr} = Q_{qtr} \times QCV_{max} / 10^6$ mmBtu/quarter = gal or scf/qtr x Btu/gal (or Btu/scf) / 10^6 (Ref: 40 CFR 75.19(c)(3)(ii)(E))
4. Total heat input ($HI_{qtr-total}$) during a quarter from all fuels combined	LM-4: $HI_{qtr-total} = \sum HI_{fuel\ qtr}$ (for all fuels) mmBtu/quarter = Sum quarterly heat inputs for all fuels. (Ref: 40 CFR 75.19(c)(3)(ii)(F))
5. Sum of hourly power generation operating rates for a unit over the quarter (MW_{qtr})	LM-5: $MW_{qtr} = \sum MW$ (for all hours) MW/quarter = Sum of the hourly operating rate for every hour in the quarter. (Ref: 40 CFR 75.19(c)(3)(ii)(H))
6. Total quarterly heat input apportioned to each hour in a quarter (if LME unit is not included in a group of LME units with a common fuel supply)	LM-7: $HI_{hr} = HI_{qtr-total} \times MW_{hr} / MW_{qtr}$ mmBtu/hr = mmBtu/qtr x MW for the hr / sum of operating loads during the quarter. (Ref: 40 CFR 75.19(c)(3)(ii)(I))
7. Total quarterly heat input apportioned to each hour in a quarter (if LME unit is included in a group of LME units with a common fuel supply)	LM-7a: $HI_{hr} = HI_{qtr-total} \times MW_{hr} / \sum MW_{qtr}$ (for all units) mmBtu/hr = mmBtu/qtr x MW for the hr / sum of quarterly loads for all units in group. (Ref: 40 CFR 75.19(c)(3)(ii)(J))

C. Nitrogen oxides requirements.

68. Nitrogen oxides requirements.

- a. The owners and operators of each NO_x Budget source and each NO_x Budget unit at the source shall hold NO_x allowances available for compliance deductions under 9 VAC 5-140-540 A, B, E, or F, as of the NO_x allowance transfer deadline, in the unit's compliance account and the source's overdraft account in an amount not less than the total NO_x emissions for the control period from the unit, as determined in accordance with Article 8 (9 VAC 5-140-700 et seq.), plus any amount necessary to account for actual utilization under 9 VAC 5-140-420 E for the control period or to account for excess emissions for a prior control period under 9 VAC 5-140-540 D or to account for withdrawal from the NO_x Budget Trading Program, or a change in regulatory status, of a NO_x Budget opt-in unit under 9 VAC 5-140-860 or 9 VAC 5-140-870.
(9 VAC 5-140-60 C.1)
- b. Each ton of nitrogen oxides emitted in excess of the NO_x Budget emissions limitation shall constitute a separate violation of the Clean Air Act, and applicable Virginia Air Pollution Control law.
(9 VAC 5-140-60 C.2)
- c. A NO_x Budget unit shall be subject to the requirements under 9 VAC 5-140-60 C.1 starting on May 31, 2004.
(9 VAC 5-140-60 C.3)
- d. NO_x allowances shall be held in, deducted from, or transferred among NO_x Allowance Tracking System accounts in accordance with 9 VAC 5-140-400 et seq., 9 VAC 5-140-500 et seq., 9 VAC 5-140-600 et seq., and 9 VAC 5-140-800 et seq.
(9 VAC 5-140-60 C.4)
- e. A NO_x allowance shall not be deducted, in order to comply with the requirements under 9 VAC 5-140-60 C.1 for a control period in a year prior to the year for which the NO_x allowance was allocated.
(9 VAC 5-140-60 C.5)
- f. A NO_x allowance allocated by the permitting authority or the administrator under the NO_x Budget Trading Program is a limited authorization to emit one ton of nitrogen oxides in accordance with the NO_x Budget Trading Program. No provision of the NO_x Budget Trading Program, the NO_x Budget permit application, the NO_x Budget permit, or an exemption under 9 VAC 5-140-50 and no provision of law shall be construed to limit the authority of the United States or the State to terminate or limit such authorization.
(9 VAC 5-140-60 C.6)
- g. A NO_x allowance allocated by the permitting authority or the administrator under the NO_x Budget Trading Program does not constitute a property right.
(9 VAC 5-140-60 C.7)

- h. Upon recordation by the administrator under 9 VAC 5-140-500 et seq., 9 VAC 5-140-600 et seq., or 9 VAC 5-140-800 et seq., every allocation, transfer, or deduction of a NO_x allowance to or from a NO_x Budget unit's compliance account or the overdraft account of the source where the unit is located is deemed to amend automatically, and become a part of, any NO_x Budget permit of the NO_x Budget unit by operation of law without any further review.
(9 VAC 5-140-60 C.8)

69. Excess emissions requirements:

The owners and operators of a NO_x Budget unit that has excess emissions in any control period shall:

- a. Surrender the NO_x allowances required for deduction under 9 VAC 5-140-540 D 1; and
- b. Pay any fine, penalty, or assessment or comply with any other remedy imposed under 9 VAC 5-140-540 D 3.
(9 VAC 5-140-60 D)

D. Recordkeeping and Reporting Requirements.

The following requirements concerning recordkeeping and reporting shall apply:

- 70. Unless otherwise provided, the owners and operators of the NO_x Budget source and each NO_x Budget unit at the source shall keep on site at the source each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the permitting authority or the administrator.
 - a. The account certificate of representation for the NO_x authorized account representative for the source and each NO_x Budget unit at the source and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with 9 VAC 5-140-130; provided that the certificate and documents shall be retained on site at the source beyond such five-year period until such documents are superseded because of the submission of a new account certificate of representation changing the NO_x authorized account representative
 - b. All emissions monitoring information, in accordance with 9 VAC 5-140-700 et seq. of this part; provided that to the extent that 9 VAC 5-140-700 et seq. provides for a three-year period for recordkeeping, the three-year period shall apply.
 - c. Copies of all reports, compliance certifications, and other submissions and all records made or required under the NO_x Budget Trading Program.
 - d. Copies of all documents used to complete a NO_x Budget permit application and any other submission under the NO_x Budget Trading Program or to demonstrate compliance with the requirements of the NO_x Budget Trading Program.
(9 VAC 5-140-60 E.1)
- 71. The NO_x authorized account representative of a NO_x Budget source and each NO_x Budget unit at the source shall submit the reports and compliance certifications required under the NO_x Budget Trading Program, including those under 9 VAC 5-140-300 et seq., 9 VAC 5-140-700 et seq., or 9 VAC 5-140-800 et seq.
(9 VAC 5-140-60 E.2)

E. Emission Testing

72. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports will be provided at the appropriate locations.
(9 VAC 5-50-30 and 9 VAC 5-140-710)
73. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

Table VIII-5

Pollutant or Stack Parameter	Test Method 40 CFR 60
NO _x Concentration	USEPA Method 7E or 20
Moisture	USEPA Method 4
Diluent gas	USEPA Method 3A

(9 VAC 5-140-700 to 710)

F. Liability

74. Any person who knowingly violates any requirement or prohibition of the NO_x Budget Trading Program, a NO_x Budget permit, or an exemption under 9 VAC 5-140-50 shall be subject to enforcement pursuant to applicable State or Federal law.
(9 VAC 5-140-60 F.1)
75. Any person who knowingly makes a false material statement in any record, submission, or report under the NO_x Budget Trading Program shall be subject to criminal enforcement pursuant to the applicable State or Federal law.
(9 VAC 5-140-60 F.2)
76. No permit revision shall excuse any violation of the requirements of the NO_x Budget Trading Program that occurs prior to the date that the revision takes effect.
(9 VAC 5-140-60 F.3)
77. Each NO_x Budget source and each NO_x Budget unit shall meet the requirements of the NO_x Budget Trading Program.
(9 VAC 5-140-60 F.4)
78. Any provision of the NO_x Budget Trading Program that applies to a NO_x Budget source or the NO_x authorized account representative of a NO_x Budget source shall also apply to the owners and operators of such source and of the NO_x Budget units at the source.
(9 VAC 5-140-60 F.5)

79. Any provision of the NO_x Budget Trading Program that applies to a NO_x Budget unit or the NO_x authorized account representative of a NO_x budget unit shall also apply to the owners and operators of such unit. Except with regard to the requirements applicable to units with a common stack under Article 8 (9 VAC 5-140-700 *et seq.*), the owners and operators and the NO_x authorized account representative of one NO_x Budget unit shall not be liable for any violation by any other NO_x Budget unit of which they are not owners or operators or the NO_x authorized account representative and that is located at a source of which they are not owners or operators or the NO_x authorized account representative.
(9 VAC 5-140-60 F.6)

G. Effect on Other Authorities.

80. No provision of the NO_x Budget Trading Program, a NO_x Budget permit application, a NO_x Budget permit, or an exemption under 9 VAC 5-140-50 shall be construed as exempting or excluding the owners and operators and, to the extent applicable, the NO_x authorized account representative of a NO_x Budget source or NO_x Budget unit from compliance with any other provision of the applicable, approved State implementation plan, a federally enforceable permit, or the Clean Air Act.
(9 VAC 5-140-60 G)

IX. Clean Air Interstate Rule (CAIR) Requirements

A. CAIR General Conditions

81. The permittee shall comply with all applicable CAIR requirements (9 VAC 5-140-1010 *et seq.*, 9 VAC 5-140-2010 *et seq.*, 9 VAC 5-140-3010 *et seq.*, 9 VAC 5-140-5010 *et seq.*, and 40 CFR Part 96) by the compliance date in the respective Part of 9 VAC 5 Chapter 140. The CAIR application in Attachment A to this document contains specific conditions and expires upon expiration of this Title V permit.
(9 VAC 5-80-110, 40 CFR Part 96, and 9 VAC 5 Chapter 140)

Attachment A

CAIR Application and Conditions